

Sega/Nanao Model MC-2000-S Repair Guide

Sega part # 200-0039 (20" tube) and 200-0058 (13" tube).

GENERAL INFORMATION

Chassis has "Nanao KB240331B" silkscreened in white letters on the parts side of the main board. This color raster video arcade game monitor operates on 100 volts AC and requires the use of an isolation transformer. Not recommended for using a 'universal' type of replacement chassis with this monitor because the tube pinout is odd.

CRT INFO: Hitachi # 510NJB22 or 510UKB22 (B&K rejuvenator socket # CR-25, 6 volt heater). A48ABY00X can be substituted.

YOKE INFO: # 330P04802

Vertical resistance is 50 ohms (yellow & brown wires). Horizontal resistance is 2 ohms (red & blue wires).

FLYBACK INFO: numbers on it are MSH1FAC02 and 4F13083AA

CAPACITOR LIST:

C101	100 uf @ 16 volts 16 volts	C401	1 uf @ 50 volts	C406	470 uf @
C407	10 uf @ 50 volts volts	C409	10 uf @ 160 volts	C410	1 uf @ 50
C411	220 uf @ 35 volts 16 volts	C412	470 uf @ 16 volts	C413	470 uf @
C414	10 uf @ 50 volts 35 volts	C416	10 uf @ 160 volts	C417	220 uf @
C418	3.3 uf @ 160 volts volts	C502	10 uf @ 50 volts	C503	1 uf @ 50
C505	1 uf @ 50 volts @ 25 volts	C510	1 uf @ 50 volts	C511	220 uf
C523	100 uf @ 50 volts 250 volts	C524	47 uf @ 250 volts	C526	1 uf @
C527	10 uf @ 160 volts 250 volts	C529	10 uf @ 50 volts	C906	22 uf @

You can make your own "capkit" by obtaining the following quantities and values:

(5) 1 uf @ 50 volts, (4) 10 uf @ 50 volts, (1) 100 uf @ 16 volts, (1) 220 uf @ 25 volts, (2) 220 uf @ 35 volts, (3) 470 uf @ 16 volts, (1) 100 uf @ 50 volts, (1) 1 uf @ 250 volts, (1) 3.3 uf @ 160 volts (replaces the original value of C418 which was 2.2 uf), (3) 10 uf @ 160 volts, (1) 22 uf @ 250 volts, and (1) 47 uf @ 250 volts. Zanen Electronics sells a complete pre-packaged capkit for this monitor as their stock number "Kit 603". Bob Roberts also sells the kit under the

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Sega-Nanao heading.

Vertical Collapse problem: Check resistor R416 (22 ohm fusible, half watt), vertical output transistors Q401 & Q402 (both are type 2SD1138), and capacitor C523 (originally a 47 uf @ 50 volt, but should be changed to 100 uf @ 50 volt). C523 is located inside the cage around the flyback. Check tantalum capacitor C408 (10 uf) as it may be shorted.

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